

## WHAT IS CLAIMED IS:

## 1. A bathing aid, comprising:

a wheelchair separable into a seat unit for a bather to sit down on and a bogie unit located under the seat unit;

5 a bathtub having an open top for receiving the seat unit with the bather sitting thereon; and

an upward-opening cover for closing the open top of the bathtub except for an opening for allowing the bather to stick the head through;

whereby the seat unit of the wheelchair with the bather sitting thereon is transferred  
10 through the open top into the bathtub with the cover opened, and then hot water is supplied into the bathtub so that a part of the body of the bather is submerged under the hot water.

## 2. A bathing aid, comprising:

a wheelchair separable into a seat unit for a bather to sit down on and a bogie unit  
15 located under the seat unit;

a bathtub having an open top for receiving the seat unit with the bather sitting thereon and a drainage port for draining hot water from the bathtub;

a cover for closing the open top of the bathtub except for an opening for allowing the bather to stick the head through; and

20 an overflow prevention mechanism having an overflow port located on a surface of the cover facing the bathtub, a cover-side overflow pipe extending from the overflow port through a body of the cover, and a bathtub-side overflow pipe, one end of which is connected to the cover-side overflow pipe when the cover is closed and the other end of which leads to either the drainage port or an external drainage pipe.

3. A bathing aid, comprising:

a wheelchair separable into a seat unit for a bather to sit down on and a bogie unit located under the seat unit;

5 a bathtub having an open top for receiving the seat unit with the bather sitting thereon;

a bathtub actuator having a motor, a vertical screw shaft rotated by the motor, and a movable unit having a ball screw engaged with the screw shaft and vertically moving with a rotation of the screw shaft; and

10 a bathtub supporter having a supportive shaft mounted on the movable unit for supporting a rear part of the bathtub, a wheel located under a bottom of the bathtub at a position closer to a front than the supportive shaft, and a guide slope descending frontward, on which the wheel runs,

whereby a vertical motion of the movable unit in the bathtub actuator produces a vertical motion of the rear end of the bathtub through the supportive shaft, with the wheel  
15 moving up or down along the guide slope, which changes the orientation of the bathtub so that the direction of the open top changes between an upward direction and a frontward direction.

4. The bathing aid according to claim 3, wherein the wheel is located inward of  
20 either sidewall of the bathtub.

5. The bathing aid according to claim 3, wherein the motor is used to bring the bathtub one of three states including: a storage state where the open top of the bathtub is directed almost frontward; a setting state where a front edge of the bathtub is located close to  
25 a floor and the open top of the bathtub is directed obliquely frontward, allowing the bather to

be transferred into or out of the bathtub; and a normal bathing state where the open top of the bathtub is directed almost upward.

6. A bathing aid, comprising:

5 a wheelchair separable into a seat unit for a bather to sit down on and a bogie unit located under the seat unit;

a bathtub having an open top for receiving the seat unit with the bather sitting thereon;

10 a bathtub supporter for supporting the bathtub while allowing the bathtub to change its orientation so that a direction of the open top changes between an upward direction and a frontward direction;

an expansible bogie-fastening element to which a predetermined part of the bogie unit is fastened for temporarily fixing the bogie unit, which element changes its position with a motion of the bathtub so that it retreats backward when the bathtub is moved toward an  
15 upright position while it expands forward when the bathtub is pushed forward;

whereby the bathtub has a wheel located under the bottom thereof that runs when the bathtub changes its orientation, and the bogie-fastening element expands forward when the wheel comes onto the bogie-fastening element and exerts a pressure thereon from above, whereas the bogie-fastening element stands up and retreats backward when it is released  
20 from the pressure exerted the wheel.

7. A bathing aid, including:

a wheelchair separable into a seat unit for a bather to sit down on and a bogie unit located under the seat unit, and

25 a bathtub having an open top for receiving the seat unit with the bather sitting

thereon,

whereby the seat unit of the wheelchair with the bather sitting thereon is transferred into the bathtub, and then hot water is supplied into the bathtub,

wherein the seat unit has a first wheel running on a bogie-side guide rail located in  
5 the bogie unit and a second wheel running on a bathtub-side guide rail located in the bathtub,  
where the first wheel is free from contact with the bathtub-side guide rail and the second  
wheel is free from contact with the bogie-side guide rail.

8. The bathing aid according to claim 7, wherein the bogie-side guide rail has  
10 two cylindrical rail elements, one located parallel to and above the other, the first wheel is  
composed of a disk-shaped core clamped by an outer and inner disks each having a diameter  
greater than that of the core, and when the first wheel runs on the bogie-side guide rail, the  
core rolls in a space between the two rail elements, with the outer and inner disks clamping  
the two rail elements from both sides.

15

9. The bathing aid according to claim 7, wherein the bogie-side guide rail has a  
surface for the first wheel to run on, and an end part of the surface has an inclined profile that  
descends toward an end of the rail to be pointed to the bathtub when the bather is transferred  
into the bathtub.

20

10. A bathing aid, comprising:

a wheelchair separable into a seat unit for a bather to sit down on and a bogie unit  
located under the seat unit;

a bathtub having an open top for receiving the seat unit with the bather sitting  
25 thereon;

a tank, located above the bathtub, for storing hot water to be supplied into the bathtub,

a water supply pipe connecting the tank and the bathtub, where the water supply pipe is provided with a water supply valve having a first valve body; and

5 a drainage pipe, an end of which is connected to the tank for draining hot water from the tank, where the drainage pipe is provided with a drainage valve having a second valve body,

whereby either one or both of the first valve body and the second valve body open or close either or both of an inlet of the water supply pipe and an inlet of the drainage pipe as

10 the one or both of the first valve body and the second valve body are submerged underwater in the tank.

11. A bathing aid, comprising:

a wheelchair separable into a seat unit for a bather to sit down on and a bogie unit  
15 located under the seat unit;

a bathtub having an open top for receiving the seat unit with the bather sitting thereon;

a water supplier for supplying hot water into the bathtub;

an input device for allowing a caregiver to choose a use of a liquid agent including a  
20 bath agent and/or a cleaning agent during bathing; and

a liquid injection mechanism having a container for storing the liquid agent beforehand and a liquid injector for injecting the liquid agent taken from the container into the hot water when the water supplier supplies the hot water into the bathtub and the use of the liquid agent is ordered through the input device.

12. A bathing aid, comprising:

a wheelchair separable into a seat unit for a bather to sit down on and a bogie unit located under the seat unit;

5 a bathtub having an open top for receiving the seat unit with the bather sitting thereon;

a tank for storing hot water to be supplied into the bathtub,

a water supply pipe connecting the tank and the bathtub;

a water temperature regulator for regulating the temperature of hot water to be introduced into the tank;

10 a bypass pipe for sending the hot water to be introduced into the tank directly to the water supply pipe; and

a water supply controller for supplying hot water from the tank through the water supply pipe into the bathtub in a normal mode, and for supplying the hot water whose temperature is regulated by the temperature regulator, through the bypass pipe and the water  
15 supply pipe into the bathtub in a special mode.